

AUSTRALIAN SPECIES OF *SPHAERIIDAE*

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Introduction

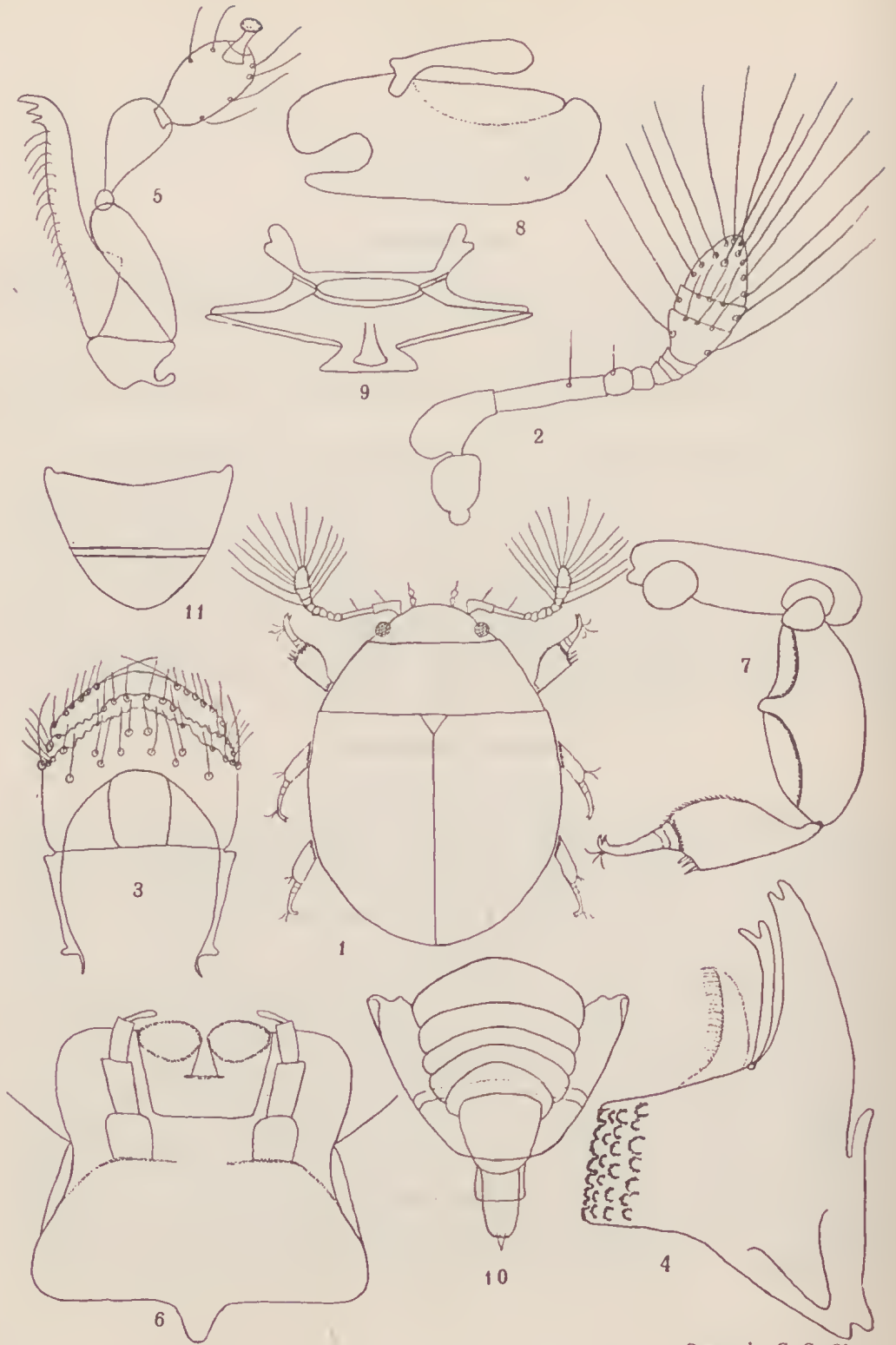
The object of this article is to record the presence of this family in Australia; to propose a new genus and to describe two new species; to point out that Matthews was in error in describing the maxilla as having two lobes; and also to note a most unusual feature in the mandibles.

The maxilla (Fig. 5) has only one lobe as noted by Erichson, Gangelbauer, Lacordaire and Reitter and figured by them, and not two lobes as stated and figured by Matthews.

A most unusual occurrence is an appendage on the left mandible (Fig. 4) and only on the left one. It can be made to move quite freely (slightly less than one-sixteenth of a circle) in specimens in balsam mounts before the balsam hardens. It can only be compared with and I should say, be called, a *lacina mobilis*, as occurs in the *Crustacea* of the division *Peracarida*. And like some of the genera in that group it is only on the left mandible. As far as I can ascertain such a thing has not been recorded for *Coleoptera*, but I have put fourteen specimens into balsam mounts and have seen it in every case and then only on the one mandible. It seems to me that Matthews found this piece free and thought that it belonged to the maxilla, and so figured it as the inner lobe. I might add that it is easily dislodged, but by careful handling it can be seen in its correct place and made to move.

Family Sphaeriidae*Neosphaerius* gen. nov.

Strongly convex, ovate. Head large, sessile, with the mouth lightly produced; eyes large, finely faceted; antennae with eleven segments, inserted under the edge, close to the eyes; two basal segments large, third long and thin, fourth and fifth small, subglobular, sixth to eighth short, transverse, eighth adnate to club, last three forming a large compact club, with very long setae. Labrum short, rounded in front, surface uneven, setose. Mandibles strongly curved, bifurcate at apex; the inner basal surface with a rough grinding (molar) surface; just above this is a fine membranous appendage, ciliate on its inner edge, apparently to act as a sieve; and on the left mandible a bifurcated, movable appendage. Maxilla with a single lobe, the lacinia, dentate at apex and sparsely ciliated on inner edge; with a four segmented palp. Palp with first segment small, second and third fairly long, strongly inflated towards apex, fourth short and very thin, truncate at apex. Labium subquadrate, with a three segmented palp. Prothorax transverse, widest at base. Scutellum triangular. Elytra entirely covering the abdomen. Wings fairly large, with only small remnants of venation and a fringe of hairs right around the margins. Abdomen with only three segments on the ventral surface, but with six on the dorsal. Legs rather short. Anterior coxae elongate, lightly separated; middle transversely oval, with a distinct trochantin, well separated; posterior very large, almost triangular, touching. Femora incrassate, anterior grooved for reception of coxa and tibia,



Drawn by C. G. Oke.

Tibiae, especially the anterior, crassate; with a few spines at apex. Tarsi thin, segmentation obscure, but apparently of three segments; with two or three long setae between the claws.

This new genus is necessary on account of the club of antennae being adnate with the eighth segment. All the figures of *Sph. acaroides* Waltl. show the club as being quite free and it is thus described.

Genotype, *N. ovensensis*, n. sp.

Neosphaerius ovensensis n. sp.

Roundly ovate, convex; nitid. Dark brownish-castaneous, antennae, except club, and legs flavous. Upper surface glabrous.

Head small, with fine sparse punctures. Eyes small, slightly prominent. Antennae scarcely reaching base of prothorax, club very large. Prothorax strongly transverse, with a few fine, short, transverse scratches and sparse microscopic punctures. Scutellum small, transversely triangular. Elytra with fairly numerous longitudinal scratches and coarse minute punctures. Length, 0.75 mm.

Hab. Victoria: Harrierville, on the Ovens River, and Wondilligong, on the Moore's Creek (C. Oke).

Type in Coll. Oke.

Neosphaerius coenensis n. sp.

Ovate, convex; very nitid. Piceous, margins and undersurface diluted with red. With minute pubescence.

Head small, with sparse, minute punctures, each puncture with a minute seta. Eyes fairly large and prominent. Antennae much as in *ovensensis*, but club longer. Prothorax transverse, with punctures as on head in front, but much larger near base. Scutellum very small. Elytra with fairly large and close punctures near base, becoming much smaller and sparse towards apex; each puncture with a very fine, short seta. Length, 0.70 mm.

Hab. N. Queensland: Coen, on the Croll Creek (C. Oke).

Type in Coll. Oke.

This species is more nitid than *ovensensis* and the punctures on base of prothorax and elytra are much larger and closer, and the setae in the punctures are very noticeable under the microscope, these being absent from *ovensensis*.

References

- ERICHSON, 1845. *Naturg. I-ns. Deutschl.*, III, 38.
 GANGLBAUR, 1899. *Käf. v. Mitteleuropa*, III, 291.
 LACORDAIRE, 1854. *Gen. Col.* II, 224.
 REITTER, 1909. *Fauna Germanica*, II, 58.
 MATTHEWS, 1899. *Monogr. Coryph. & Sphac.*, p. 209.

Explanation of Text Figures

- Fig. 1.—*Neosphaerius ovensensis*, n. sp.
 Fig. 2.—Antenna.
 Fig. 3.—Labrum.
 Fig. 4.—Left mandible from below.
 Fig. 5.—Maxilla.
 Fig. 6.—Labium.
 Fig. 7.—Anterior leg.
 Fig. 8.—Middle coxa.
 Fig. 9.—Prosternum.
 Fig. 10.—Abdomen dorsal view.
 Fig. 11.—Abdomen ventral view.